HERNIA OF THE PLEURA INTO THE NECK.

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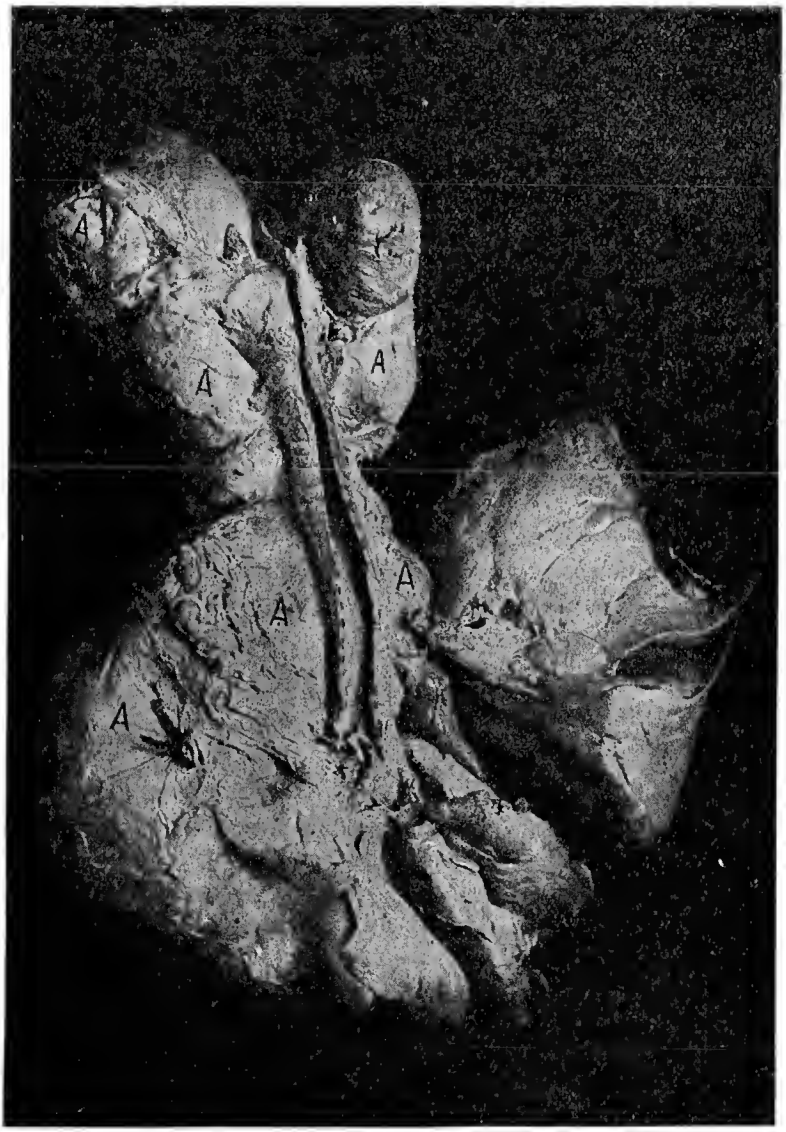
THE little patient, the subject of the present report, was admitted to my service at the Methodist Episcopal Hospital on August 20, 1888, with the following history: Six months before when at the age of three months, having previously enjoyed good health, she was attacked with acute bronchitis, and suffered greatly from violent paroxysms of coughing. The attack gradually subsided, but in the meanwhile, the mother noticed a swelling upon the right side of the neck, which became larger when the child cried or coughed, and which almost entirely disappeared upon inspiration. This gradually increased in size, both at its base and in an upward direction, until in the course of a month it was found that a similar tumor had made its appearance upon the left side of the neck.

The patient upon admission presented the appearances shown in the accompany lithographic drawing. The child was poorly nourished, and was nursed from an anæmic mother, who was evidently furnishing an insufficient supply of nourishment, and that of an inferior quality. It presented two well marked tumors of the neck, one upon either side of the trachea, both of which, upon inspiration, nearly disappeared, but became full and tense upon expiration. The tumor upon the left side of the neck presented a soft protruding mass, beginning above at the lower border of the inferior maxilla, and extending below nearly to the border of the clavicle. The tumor upon the right side presented a similar but smaller protrusion. She had constant dyspnœa and was aphonic. The child was weaned and fed on peptonized milk.

Her general condition apparently improved until an attack of acute bronchitis supervened, which ended fatally in three days. I am indebted to Dr. Eugene Hodenpyl, Pathologist to the Hospital, for the very careful autopsy and accompanying preparation of the lungs, pleura, etc., and the following account of the post-mortem appearances: "The protrusions of the neck are but portions of an enormous sac, connected with the upper part of the right lung. When distended, it occupied a large part of the right pleural cavity and anterior mediastinal space between the thymus and pericardium. The tumor had passed out of the right chest and into the neck behind, and to the sides of the trachea and œsophagus as high as the jaw, extending posteriorly to the vertebral column. The portion of the sac on the left side had found its way into the upper part of the *left* pleural cavity, displacing the lung and costal pleura of that side side downward to the extent of two inches. The sac, which contained odorless air, and had thin, smooth, glistening, and transparent walls, had pushed its way behind the trachea and upward toward the anterior surface of the neck, until it had produced the tumors noted. It also completely surrounded the œsophagus as high as the lower border of the jaw. The trachea and larger bronchi are very much congested and contained muco-pus. There is a rupture of the primary bronchus, which enters the upper lobe of the right lung, affording direct communication with the cavity of the sac. The right lung is collapsed and lies in the bottom of the pleural cavity. The heart is somewhat displaced toward the left. The other organs show no lesions."

As will be seen by the above description of the anatomical appearances, the tumors were the result of a rupture of the primary bronchus in the upper lobe of the right lung. The air escaping underneath the pleura, stripped it from its pulmonary attachments. As the sac thus formed forced its way through the apex of the pleural cavity, its walls were reinforced by the costal pleura. As it ascended into the neck, it was still further reinforced by the deep fascia of the neck. Passing behind the trachea and around the œsophagus, it formed the tumor upon the left side of the neck; this, descending, forced before it, in turn, the deep fascia of the neck



IG. 2.—TRACHEA AND LUNGS, WITH DILATED PLEUROCELE AS SEEN FROM BEHIND.
A. A. A. A. PLEUROCELE.

and costal pleura of the left side, finally entering the pleural cavity on this side.

The subject of air tumors of the neck has been very carefully studied recently by Dr. L. H. Petit, in a paper read before the Congres Français de Chirurgie, in March of last year. Petit describes but two pathological conditions constituting "ærocele" of the neck, although in his paper he speaks of the latter as being "presented in four very distinct forms." As a matter of fact, however, as before stated, but two pathological forms of this affection are described: First, a perforation of the mucous membrane of the trachea may lead to a diffused emphysema of the neck. Second, there may occur a herniated condition of the mucous membrane of the trachea, which is forced into the structures upon the side of the air-tube further and further, thus constituting a true air tumor of the neck. This, upon inspiration, becomes lessened, and increases upon expiration. Compression may also temporarily reduce its volume. Closure of the connection between this hernial sac and the cavity of the trachea may prevent the reduction by compression, and render the tumor more or less resistant to pressure. This true air tumor of the neck may be converted into a diffused emphysema by rupture of its walls. Petit's description of "four distinct forms" therefore, resolves itself into the two conditions above described. He had evidently searched the literature of the subject very carefully, but can scarcely be said to have added anything new to our knowledge upon the subject.

P. Fabre, describes[1] a case of so-called air-tumor of the neck, which he observed in a child about a day old. This consisted of an air diverticulum in front of the neck and at the superior middle portion of the thorax. When the child cried the diverticulum would become filled with air, which latter disappeared upon inspiration, leaving a marked depression. The child when last seen was fourteen months old, and the condition described still existed. One must infer from Fabre's description of this case, that the child was the subject of congenital fissure of the sternum. Otherwise it is difficult to con-

[1]Gaz. Med. de Paris, 1886, 7th sér, LVII, 374.

ceive of a tumor of the character mentioned existing at the "superior middle portion of the thorax," without either fissure or entire absence of the sternum or ribs.

Most careful search of the literature of this subject fails to reveal a description of the condition herewith presented or anything analogous to it.

I am indebted to Dr. Prudden, Curator of the Museum of the College of Physicians and Surgeons, New York, for the opportunity of studying in connection with this subject, a specimen taken from an infant a few days old, who died of acute bronchitis. In this case, a rupture of a bronchus in the upper lobe of the lung occurred, with stripping of the pulmonary pleura from its attachments. This constitutes a condition which primarily occurred in my own case, and had the child lived, it would, in all probability, have presented another example of hernia of the pleura into the neck.